CLINICAL AND PROGNOSTIC IMPORTANCE OF TRANSIENT ISCHEMIC ATTACKS IN THE DEVELOPMENT OF CEREBRAL STROKES IN EMERGENCY NEUROLOGY

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Forecast specification of transient ischemic attacks has a direct influence on the important problem of the forecast and preventive measures of a brain stroke, to occurrence, which can precede transitory ischemic attacks. In the present work the retrospective analysis of cases with a brain stroke is made 178 patients with the presence of anamnesis transitory ischemic attacks, which have been treated in the branches of emergency neurology of Khorezm branch under Republican Center of Emergency Medical Treatment.

Keywords: transient ischemic attacks, hypertensive cerebral crises, ischemic stroke, hemorrhagic stroke.

The prognostic value in relation to the possibility of developing a repeated cerebral stroke in the event of transient ischemic attacks in young people is not well understood. As several authors [1,4,6], different conclusions on this issue are associated, first of all, with the unequal nature of the study, the lack of unified diagnostic criteria, which makes it difficult to compare the results obtained. Interest in this problem is due to the fact that the development of a repeated cerebral stroke is a formidable complication and in most cases determines the prognosis and outcome of the disease. Often they end in more severe outcomes than the first violations of this nature [7,8]. That is why the issues of their prevention are urgent, especially in patients who have undergone transient ischemic attacks.

The **purpose** of this work is to study the clinical significance of transient ischemic attacks - TIA in the development of repeated cerebral strokes and the outcome of the disease.

Materials and methods of research. In the present work, a retrospective analysis of cases of cerebral stroke with a history of TIA was made. For this purpose, the medical history of 180 patients treated in the department of emergency neurology of the Khorezm branch of RCEMT was analyzed. Of these, 95 (53%) patients developed a stroke with hypertension, 48 (27%) had cerebral atherosclerosis, 21 (12%) had obesity, 16 (9%) had diabetes mellitus. To transient impairments of cerebral circulation developing before the stroke, we, according to the recommendation of the WHO [4,5], referred only those cases in

which cerebral, focal or mixed symptoms lasted no more than 24 hours. Not only "transient ischemic attacks" were included in the group of transient disorders of cerebral circulation, but also hypertensive cerebral crises that lasted no more than a day. It was also established that the relationship between transient impairments of cerebral circulation and cerebral stroke is different for transient ischemic attacks - TIA and hypertensive cerebral crises [1,2,6]. Brain cerebral symptomatology was considered as an expression of transient disturbance of cerebral circulation only when it arose suddenly and was represented by more than two general cerebral symptoms (headache, nonsystemic dizziness, etc.). Attacks of systemic vertigo were regarded as a symptom of a transient cerebral circulatory disorder in the vertebrobasilar basin only if they were combined with some other local neurologic symptom.

Results of discussion. As can be seen from Tab. 1, the greatest number of patients with cerebral stroke is age, according to the WHO classification, from 45 to 55 years. In patients with hypertensive disease, stroke developed significantly more often.

Of the 178 patients, 84 (47%) sought medical care at different times after the onset of the stroke. It should be noted that in most patients with transient ischemic attacks, which resulted in a stroke, there was a different degree of hypertensive disease, coronary heart disease, diabetes mellitus and peripheral vascular atherosclerosis, which aggravated the somatic status.

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Table 1

The distribution of patients by age and underlying disease, which led to a stroke

Age	The main disease leading to a stroke				The total number of patients
	Hypertensive disease	Cerebral atherosclerosis	obesity	Diabetes mellitus	
	95	48	19	16	
From 20 to 44	35	1	3	1	10
45 to 54	49	5	8	4	66
55 to 64	23	19	5	6	51
65 to 74	12	15	2	3	32
From 74 and above	6	8	1	2	17

The results of our studies showed that in 74 patients (42%) with transient attacks in the history of the stroke occurred in the period from 10 months to 3.8 years. However, it occurred earlier-up to 6 months in 28 (16%) patients, from 6 months to 1 year in 43 (23%), much later-from 3 to 5 years in 23 (13%) and 5 to 10 years - In 10 (6%).

When taking into account the underlying disease, it is established that in hypertensive illness this period is on average 1.5 years, with atherosclerosis - 2.4 years, and with the combination of atherosclerosis and hypertensive disease, 1.8 years. Many authors believe that in cerebral

stroke, the vascular basin is most often affected, in which previous transient ischemic attacks were noted [4,5,7].

Our observations show that 118 (65.6%) patients developed a stroke as a result of circulatory disturbance in the carotid basin, and 62 (34.4%) in vertebrobasilar disease. Thus, a significant prevalence of the number of strokes that develop as a result of pathology in the system of carotid arteries is revealed, which corresponds to the literature data [1,3,8].

Regardless of the underlying vascular disease, the same vascular pool was affected in most patients with stroke (Tab.2).

Table 2

Prognostic value of transient ischemic attacks depending on the vascular pool

Vascular pool	Transient ischemic attacks			
	With the subsequent cerebral stroke		Result	
	Abs	%	Ischemic stroke	Hemorrhagic stroke
Carotid pool	118	65.6	86 (48%)	32 (18%)
Vertebrobasilar pool	62	34.4	43 (24%)	19 (10%)

When analyzing the results of our clinical observations, it was found that, when circulation in the carotid basin was disturbed, cerebral stroke developed not only more often but also earlier than the stroke caused by a deficiency in the vertebrobasilar basin.

When determining the prognosis of transient ischemic attacks, it is important to consider the importance of individual clinical symptoms. When comparing local symptoms in the group of people with transient attacks not complicated by stroke, and in the group of people with cerebral stroke and transient attacks in the history of patients of the second group, the symptoms were

also more frequent: motor disorders (39% compared to 28.6%), speech disorders (27% compared to 15.3%) and bulbar disorders (9.5% compared with 4.7%).

Thus, the data obtained allow for a relatively large risk of developing cerebral stroke when motor and speech disorders appear during transient ischemic attacks [5,8].

Mortality of the 128 patients with ischemic stroke, 83 (65%) transient ischemic attacks in the anamnesis were not noted; In this group, 13 (7%) patients died in the acute period of the stroke. Out of 45 (35%) patients with ischemic stroke and with transient ischemic attacks, 3 (2%)

patients died in anamnesis.

Thus, the mortality from ischemic stroke was significantly lower among those in whom transient ischemic attacks preceded ischemic stroke. This can be explained by the fact that transient vascular disorders contribute to the development of collateral circulation pathways in atherosclerotic vascular lesions [2,3,8]. However, another explanation is possible. Patients who have suffered transient ischemic attacks appear to be treated more systematically than those who did not.

Among the 50 patients with hemorrhagic stroke, 37 (74%) had no transient ischemic attacks in the anamnesis, of which 14 (8%) died.

At the same time, 9 (5%) patients died of 13 (26%) patients with hemorrhagic stroke and transient ischemic attacks. This is due to the fact that hypertensive cerebral crises, which basically preceded hemorrhagic stroke, arose as a result of vasospasm followed by plasma penetration of the vascular walls, which led to the formation of pathological changes in them, which created favorable conditions for rupture of the vessel wall [3,4,7]. In patients with ischemic stroke (survivors), the average age at the appearance of the first transient ischemic attacks was 51.2 years, and in the deceased group - 63 years. In the group of patients with hemorrhagic stroke (survivors), on the contrary, the average age for the appearance of transient ischemic attacks before their stroke was 53.1 years, and in the deceased group - 46.2 years.

Thus, in patients with ischemic stroke, the prognosis for life is better if they have transition-

al ischemic attacks that precede stroke and develop at a younger age, when the possibilities of compensatory mechanisms are more significant [1,4,8].

Our retrospective analysis of a very large number of cases of cerebral stroke has allowed us not only to establish the frequency of transient ischemic attacks in stroke of different etiology and character, but also to evaluate their prognostic value regarding the possibility of recurrence of the cerebral stroke: timing, localization of lesions and outcomes. When predicting transient ischemic attacks, it is necessary to take into account the nature of seizures (cerebral, local, mixed). If TIA manifest local symptoms, the forecast is worse. TIAs that originated in the carotid basin are more threatening in terms of the possibility of stroke than those occurring in the vertebrobasilar basin.

Conclusion. Thus, the results of the study suggest that transient ischemic attacks can be harbingers of a stroke if they arise against the background of such aggravating factors as coronary heart disease, atherosclerosis, diabetes mellitus and others that, regardless of the presence or absence of TIA, can lead to vascular catastrophe.

Based on the analysis, it was noted that in patients with transient ischemic attacks, repeated ischemic cerebral stroke usually develops at a later age and proceeds more easily than in patients who did not have these disorders.

The threat of hemorrhage to the brain and mortality from it is greater if TIA precedes hemorrhagic stroke.

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XÜLASƏ

TƏXİRƏSALINMAZ NEVROLOGİYADA TRANZİTOR İŞEMİK HƏMLƏLƏRİN BEYİN İNSULTLARININ İNKİŞAFINDA KLİNİK-PROQNOSTİK ƏHƏMİYYƏTİ

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Tranzitor işemik həmlə diaqnozunun dəqiqləşdirilməsi baş beyin insultunun proqnoz və müalicəsi kimi ciddi problemi ilə birbaşa əlaqədardır. Tranzitor işemik həmlələr baş beyin insultlarının əvvəl yarana bilər. Təqdim edilmiş məqalədə Təxirəsalınmaz tibbi yardım Respublika elmi mərkəzinin Xarəzm filialının təxirəsalınmaz nevrologiya şöbəsində stasionar müalicə almış anamnezində tranzitor işemik həmlələr olan 178 insult keçirmiş xəstələrin retrospektiv analizi aparılmışdır.

Açar sözlər: tranzitor işemik həmlə, hipertonik serebral kriz, işemik insult, hemorragik insult.

РЕЗЮМЕ

КЛИНИКО-ПРОГНОСТИЧЕСКАЯ ЗНАЧИМОСТЬ ТРАНЗИТОРНЫХ ИШЕМИЧЕСКИХ АТАК В РАЗВИТИИ МОЗГОВЫХ ИНСУЛЬТОВ В ЭКСТРЕННОЙ НЕВРОЛОГИИ

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Уточнение диагноза транзиторных ишемических атак имеет непосредственное отношение к важной проблеме прогноза и профилактики мозгового инсульта, возникновению которого могут предшествовать транзиторные ишемические атаки. В настоящей работе произведён ретроспективный анализ случаев мозгового инсульта у 178 больных с наличием в анамнезе транзиторных ишемических атак, леченных в отделении экстренной неврологии Хорезмского филиала Республиканского научного центра экстренной медицинской помощи.

Ключевые слова: транзиторная ишемическая атака, гипертонический церебральный криз, ишемический инсульт, геморрагический инсульт.

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